FINAL

ECI PROJECT NO. EPA 03123.03
TDD 02-04-01-00

CLEAN AIR ACT SECTION 112(r) INSPECTION REPORT

Blue Ridge Farms, Inc.
Brooklyn, NY

Stationary Source	Blue Ridge Farms, Inc.
Date of Inspection	February 23, 2004
USEPA	Dwayne Harrington, USEPA – Region II, Edison, NJ
Contractor	Neil Mulvey, Environmental Compliance Inc.
Description of Activities	• Opening meeting with facility representative. • Program audit. • Closing meeting with facility representatives. Program audit consisted of the following activities: 1. Document review. 2. Field verification. 3. Personnel interviews.

STATIONARY SOURCE INFORMATION

EPA Facility ID #	1000-0011-1489
Date of Initial Submission	June 18, 1999 Anniversary Date – 6/18/04
Facility Location	3301 Atlantic Avenue Brooklyn, NY 11208-1991 Kings County
Number of Employees	500 employees Partial Unionized Workforce
Description of Surrounding Area	Urban Residential / Retail Commercial
Participants	The following federal officials participated in the inspection:

	USEPA Dwayne Harrington – USEPA, Region II, Edison, NJ The following Blue Ridge Farms, Inc., personnel participated in the inspection: Janie Dixon, Human Resources Louie Lambros, General Manager* Amacleto Santos, Refrigeration Operator Richard Siegel, President * Lead Facility Representative

REGISTRATION INFORMATION

Process ID #	10968
Program Level (as reported in RMP)	Program 3
Process Chemicals	Anhydrous Ammonia @ 18,800-lbs. (CAS No. 7664-41-7)
NAICS Code	311991 (Perishable Prepared Food Manufacturing)

GENERAL COMMENTS

NOTE: The initial site inspection was scheduled for January 20, 2004. Mr. Harrington and Mr. John Ulshoefer, USEPA – Region II, and Mr. Mulvey visited the facility on January 20. Facility personnel were not prepared for the inspection. Additionally, they indicated that the primary contact, Mr. Louie Lambros, was off-site and unavailable. The USEPA team did conduct a tour of the ammonia refrigeration system and discussed with facility management the purpose and intent of the visit. It was agreed that a second inspection date would be scheduled to accommodate Mr. Lambros' schedule and to allow the facility to better prepare for the inspection. The second inspection was conducted on February 23, 2004. This report presents a summary of the findings and recommendations from the February 23 inspection.

The facility is located in a densely populated residential / retail commercial neighborhood in Brooklyn, NY. Private residences and neighboring businesses are located immediately adjacent to the facility.

Ammonia refrigeration equipment includes:

- Six compressors (C-1, C-2, C-3, C-4, C-5, and C-6)
- Four evaporative condensers (EC-1, EC-2, EC-3, and EC-4)
- Main high pressure receiver (R-1); listed capacity of 16,000-lbs. ammonia
- Second high pressure receiver (R-2); listed capacity of 2,800-lbs. ammonia
- Circulation tank (TT-1); listed capacity of 485-gallons
- Ammonia recirculation pumps (P1 and P2)
- Air handling units (FC-V1 through FC-V8 and FC-1 through FC-16); flooded type system
- Other equipment includes a thermosyphon, ice maker, purger, and liquid supply and vapor return lines

The compressors, receivers, and circulation package are located in an engine room located on the first level of the facility, beneath offices located above. The evaporative condensers are located on the roof of the building.

Ammonia detectors were located near the high pressure receiver and in the water recirculation room adjacent to the compressor area. These ammonia detectors were located approximately five feet from the floor. These ammonia detectors are designed to activate ventilation fans and automatically close overhead doors leading to the engine room. Other ammonia detectors are located (at elevated positions) in the end use areas (i.e., air handing use areas).

Emergency stop buttons are located at the entrance to the engine room and water recirculation room. The emergency stops automatically stop the compressors.

The facility operates 24/7. There are three ammonia refrigeration system operators. Facility security is provided 24/7.

RMP DOCUMENTATION

The facility has a written *Process Safety Management and Risk Management Plan, Technical Supporting Records*, document dated June 1, 1999 (identified as 'Draft'). The document (see Attachment 1) was developed by an independent consultant. Sections of the document present a written procedure or program for a required RMP element. Other sections provide a guideline for the development of the RMP element. Sections of the document that are guidelines only (i.e., do not constitute a compliant written RMP program) include operating procedures, training, and mechanical integrity. Sections of the document that provide a written RMP element include:

- Process safety information
- Management of change
- Pre-startup safety review

- Compliance audit
- Incident investigation
- Employee participation
- Hot work permit
- Contractor procedure

Management System

Facility management demonstrated a poor understanding of the RMP program. While facility management was able to product some written documents (i.e., the *Process Safety Management and Risk Management Plan (Plan)*, as described above, they do not have a working understanding of the programs and procedures described in the *Plan*.

There is no written description of a management system.

Process Safety Information (PSI)

The *Plan* includes some of the required PSI information, including safe operating limits, and equipment specifications. Some piping and instrument diagrams (P&IDs), dated September 1991, were available for review, however facility management was not certain that the P&IDs accurately represented the existing system. There was no information available on the ventilation system design, safety systems, or documentation that the equipment complies with recognized and generally accepted good engineering practices.

Process Hazard Analysis (PHA)

A PHA using the HAZOP method was conducted during a single session held on March 29, 1999. The results of the PHA are documented in a report dated May, 1999. The PHA team included facility personnel and outside contractors. The ammonia refrigeration system was organized into six nodes. Documentation includes deviations, causes, consequences, and safeguards, but does not represent a thorough review. While the PHA satisfied the RMP requirements, only two recommendations were identified. One recommendation (i.e., installation of additional ammonia detectors) was resolved; no documentation existed on the second recommendation (i.e., improving access to valve VRE-1/2). The five-year revalidation is due by May, 2004. See Attachment 2 for a copy of the May, 1999 PHA study report.

Operating Procedures

The *Plan* provides a guideline for development of written operating procedures. The facility did not produce any written operating procedures for review.

Training

The *Plan* includes a written description of an operator training program, however, facility management could not produce any records of employee training.

Mechanical Integrity

The *Plan* provides a guideline for development of a mechanical integrity program, however, facility management could not produce a written mechanical integrity program or records of equipment inspections and tests.

Management of Change (MOC)

The *Plan* includes a written description of a management of change procedure, however, facility management could not produce any records of completed MOCs. Facility personnel did not demonstrate an understanding of the MOC procedure.

Pre-Startup Review (PSR)

The *Plan* includes a written description of a pre-startup review procedure, however, facility management could not produce any records of completed PSRs. Facility personnel did not demonstrate an understanding of the PSR procedure.

Compliance Audits

The *Plan* includes a written description of a compliance audit program, however, facility management could not produce any records of completed compliance audits. A compliance audit should have been completed by June 2002.

Incident Investigation

The *Plan* includes a written description of an incident investigation procedure, however, facility management could not produce any records of completed incident investigation reviews.

Employee Participation

The *Plan* includes a written description of an employee participation program, however, facility management could not produce any records of implementation.

Hot Work Permit

The *Plan* includes a written description of a hot work permit program. Facility management did not produce any records for review.

Contractor Safety

The *Plan* includes a written description of a contractor safety program, however, facility management could not produce any records of implementation.

Emergency Response
(The facility's emergency response plan was reviewed by the USEPA inspector who was on the inspection team).

Blue Ridge Farms has a general facility emergency notification and evacuation plan, and performs and documents regular facility-wide employee evacuation drills. The facility did not, however, have specific internal notification and/or response plans for incidents involving their ammonia refrigeration system. The facility stated that they depend solely on the local NYFD station haz-mat response team for incidents involving their ammonia system. They stated that the NYFD routinely inspects and performs yearly drills at the facility. They did not, however, have records describing their incident notification and/or response agreements and procedures with the NYFD, nor documents recording the dates and results of the NYFD inspections and/or response drills. The General Manager of the facility, who was the lead representative for the RMP inspection, did not know the specific local NYFD station responsible (nor how to access their general telephone number) for incidents involving their ammonia system.

Facility Tour
Several items noted during the facility tour include:

- Ammonia detectors were located near the high pressure receiver and in the water recirculation room adjacent to the compressor area. These ammonia detectors were located approximately five feet from the floor. An ammonia detector located in the warehouse was also located approximately five feet from the floor. Typically ammonia detectors are located at elevated heights due to the characteristics of ammonia (i.e., less dense than air). **The facility should evaluate and determine the most desirable location for these detectors.**

- Containers of flammable/combustible liquids (i.e., hydraulic fluids) were observed in the engine room. **The facility should consider locating flammable/combustible liquids in areas separate from equipment handling anhydrous ammonia.**

FINDINGS/RECOMMENDATIONS

- Facility management demonstrated a poor understanding of the RMP program. While facility management was able to product some written documents (i.e., the *Process Safety Management and Risk Management Plan*), they do not have a working understanding of the programs and procedures described in the Plan. There is no written description of a management system. **Facility management needs to be trained / oriented regarding RMP requirements. A management system should be developed and a written description prepared.**

- It appears that the ammonia inventory quantity is based on the inventory in two vessels (R-1 and R-2), and does not account for inventory in other vessels, transfer lines, and vapor return lines. **The facility should re-calculate the estimated maximum inventory of anhydrous ammonia in the refrigeration system.**

- The *Plan* includes limited PSI information, however, the P&IDs were 13-years old and not confirmed as representative of the existing system, and there was no information available on the ventilation system design, safety systems, or documentation that the equipment complies with recognized and generally accepted good engineering practices. **The facility should review the PSI requirements at (§68.65) and compile updated and accurate information reflective of the existing system.**

- The May, 1999 PHA identified two recommendations. One recommendation (i.e., installation of additional ammonia detectors) was resolved; no documentation existed on the second recommendation (i.e., improving access to valve VRE-1/2). **The facility should confirm the status of VRE-1/2 recommendation.**

- The May, 1999 PHA identified only two recommendations, indicating that the study may not have been thorough in considering risk reduction measures. **The facility should conduct a detailed and thorough PHA during the five-year PHA revalidation required prior to May, 2004.**

- The facility did not produce any written operating procedures for review. **The facility must develop written operating procedures for the ammonia refrigeration system in accordance with §68.69.**

- The *Plan* included a written description of an operator training program, however, facility management could not produce any records of employee training. **The facility must implement an operator training program in accordance with §68.71.**

- The *Plan* provides a guideline for development of a mechanical integrity program, however, facility management could not produce a written mechanical integrity program or records of equipment inspections and tests. **The facility must develop and implement a mechanical integrity program in accordance with §68.73.**

- The *Plan* includes a written description of a management of change procedure, however, facility management could not produce any records of completed MOCs. Facility personnel did not demonstrate an understanding of the MOC procedure. **The facility should review the requirements of MOC and ensure implementation in accordance with §68.75.**

- The *Plan* includes a written description of a pre-startup review procedure, however, facility management could not produce any records of completed PSRs. Facility

personnel did not demonstrate an understanding of the PSR procedure. **The facility should review the requirements of PSR and ensure implementation in accordance with §68.77.**

- The *Plan* includes a written description of a compliance audit program, however, facility management could not produce any records of completed compliance audits. A compliance audit should have been completed by June 2002. **The facility should conduct and document a compliance audit, in accordance with §68.79.**

- The *Plan* includes a written description of an incident investigation procedure, however, facility management could not produce any records of completed incident investigation reviews**. Facility management should ensure that they understand their incident investigation procedure.**

- The *Plan* includes a written description of an employee participation program, however, facility management could not produce any records of implementation. **Facility management should ensure that they understand their employee participation program.**

- The *Plan* includes a written description of a contractor safety program, however, facility management could not produce any records of implementation. **The facility should review the requirements of contractor safety and ensure implementation in accordance with §68.87.**

- The facility does not have specific internal notification and/or response plans for incidents involving their ammonia refrigeration system. The facility stated that they depend solely on the local NYFD station haz-mat response team for incidents involving their ammonia system. They stated that the NYFD routinely inspects and performs yearly drills at the facility. They did not, however, have records describing their incident notification and/or response agreements and procedures with the NYFD, nor documents recording the dates and results of the NYFD inspections and/or response drills. The General Manager of the facility, who was the lead representative for the RMP inspection, did not know the specific local NYFD station responsible (nor how to access their general telephone number) for incidents involving their ammonia system. **Facility management should address these deficiencies in their emergency response procedures.**

LIST OF ATTACHMENTS

1. *Process Safety Management and Risk Management Plan, Technical Supporting Documents*, June 1, 1999 (Draft), Blue Ridge Farms, Inc., Brooklyn, NY.

2. Process Hazard Review, May, 1999, Blue Ridge Farms, Inc., Brooklyn, NY.